IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: William H. Whitted	Art Unit	: 3637
Serial No.	: 10/675,233	Examiner	: Jose V. Chen
Filed	: September 29, 2003	Conf. No.	: 9853
Title	: TILT-OUT SHELF GUIDE MECHANISM SUITABLE FOR RACK-MOUNT COMPUTING SYSTEMS		

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BRIEF ON APPEAL ON BEHALF OF APPELLANT UNDER 37 C.F.R. §41.37

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I hereby certify that this paper was filed with the Patent and Trademark Office using the EFS-WEB system on this date: September 23, 2008.

TABLE OF CONTENTS

BRIEF ON APPEAL ON BEHALF OF APPELLANT

In support of the Notice of Appeal filed May 23, 2008, appealing the Examiner's Final Rejection of each of claims 1-25 mailed November 23, 2007, which appear in the attached Appendix A, Appellant hereby provides the following remarks.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Google, Inc., the assignee of all right, title, and interest in the above-referenced application by way of Assignment recorded on April 27, 2005, at reel/frame 016173/0936.

II. RELATED APPEALS AND INTERFERENCES

There are no known related appeals and/or interferences.

III. STATUS OF CLAIMS

Claims 1-25 are pending.

Claims 1-25 are under consideration.

No claims have been cancelled.

Claims 1-25 stand rejected.

Claim 1 and 14 are in independent form.

The final rejection of claims 1-25 is being appealed. Claims 1 and 14 are involved directly in the appeal. Claims 2-13 and 15-25 are not directly involved in the appeal but rather are involved only by virtue of their dependency from one of claims 1 or 14.

IV. STATUS OF AMENDMENTS

No amendments subsequent to the final rejection have been submitted.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a system providing access to components of a rack mount computing system 10 (*see, e.g.*, Figs. 1-2; [0021]-[0022]). Claim 1 includes the features of a slidable electronics module shelf 40 (*see, e.g.*, Figs. 1-5, 7-9; [0023]-[0024]) having a front shelf end (*see, e.g.*, Fig. 5; [0023]-[0025]) and a rear shelf end (*see, e.g.*, Fig. 4; [0025]), where the shelf 40 includes an electronics components region 42 (*see, e.g.*, Fig. 4; [0024]) and a rear catch mechanism 46 at the rear shelf end (*see, e.g.*, Figs. 3-4; [0027]-[0028]). The rear catch mechanism 46 includes at least one pivot 48 (*see, e.g., id.*). Claim 1 further includes the features of a pair of opposing electronics module guides 20 (*see, e.g.*, Figs. 1-2, 6-8; [0022]-[0023]) to support and guide the shelf 40 relative thereto (*see, e.g.*, Figs. 1, 7-8; [0023]), where the guides 20 have a front guide end (*see, e.g.*, Figs. 1-2, 6; [0029]) and a rear guide end (*see, e.g.*, [0034]), and each guide 20 includes a track 22 (*see, e.g.*, Figs. 1-2, 6; [0029]) to support and guide the shelf 40 thereon (*see, e.g., id.*). The guides 20 further include a pivot support 24 disposed at the front guide end (*see, e.g.*, Fig. 1-2, 6; [0030]) and configured to engage the pivot 48 of the rear catch mechanism 46 at the rear shelf end of the shelf 40 (*see, e.g.*, Figs. 3-4, 6; [0030]-[0032]), whereupon the shelf 40 is pivotable about the pivot 48 (*see, e.g.*, Figs. 7-9; [0032], [0035]-[0036]). The pivot 48 is supported by the pivot support 24 of the guides 20 (*see, e.g., id.*) such that when the front shelf end of the slidable electronics module shelf 40 is lowered relative to the rear shelf end of the slidable electronics module shelf 40, the electronics module guides 20 substantially support the slidable electronics module via the at least one pivot 48 of the rear catch mechanism 46 (*see, e.g.*, Figs. 7-9; [0028], [0032]-[0033], [0035]-[0036]).

Independent claim 14 is directed to a shelf support system (*see, e.g.*, Figs. 1-2; [0021]-[0022]). Claim 14 includes the features of a slidable shelf 40 (*see, e.g.*, Figs. 1-5, 7-9; [0023]-[0024]) having a front shelf end (*see, e.g.*, Fig. 5; [0023]-[0025]) and a rear shelf end (*see, e.g.*, Fig. 4; [0025]). The shelf 40 includes a storage mounting region 42 (*see, e.g.*, Fig. 4; [0024]) and a rear catch mechanism 46 at the rear shelf end (*see, e.g.*, Figs. 3-4; [0027]-[0028]). The rear catch mechanism 46 includes at least one pivot 48 (*see, e.g., id.*). Claim 14 further includes the features of a pair of opposing shelf tracks 22 (*see, e.g.*, Figs. 1-2, 6; [0029]) having a front track end and a rear track end (*see, e.g.*, Figs. 1-2, 6; [0029], [0034]), where the tracks 22 are

configured to support and guide the shelf 40 relative thereto (*see, e.g.*, Figs. 1-2, 6; [0029]). The shelf 40 being in a stored position when the front shelf end is approximately adjacent to the front track end and the rear shelf end is approximately adjacent to the rear track end (*see, e.g.*, Figs. 1-2; [0023]). Claim 14 further includes the features of a pivot support 24 disposed at the front track end (*see, e.g.*, Fig. 1-2, 6; [0030]) and configured to engage the pivot 48 of the rear catch mechanism 46 at the rear shelf end of the shelf 40 where the rear shelf end of the shelf 40 is approximately adjacent to the front track end of the tracks 22 (*see, e.g.*, Figs. 3-4, 6; [0030]-[0032]). whereupon the pivot 48 of the shelf 40 is supported by the pivot support 24 (*see, e.g.*, Figs. 7-9; [0032], [0035]-[0036]) and the shelf 40 is pivotable about the pivot 48 (*see, e.g., id.*) such that when the front shelf end of the slidable shelf 40 is lowered relative to the rear shelf end of the slidable shelf 40, the pivot support 24 substantially supports the slidable shelf 40 via the at least one pivot 48 of the rear catch mechanism 46 (*see, e.g.*, Figs. 7-9; [0028], [0032]-[0033], [0035]-[0036]).

Accordingly, the present disclosure is directed to a tilt out shelf guide mechanism suitable, for example, to rack mount computing systems. Such systems, traditionally, require maintenance and servicing of the electronic modules (*e.g.*, servers and server components) stored on the rack (*see, e.g.*, [0004]). In particular, servicing and maintenance of the electronic modules in the rack mount computing system generally occur while the remainder of the modules within the rack continue in operation (*see, e.g., id.*). Thus, fast and convenient access to the electronic modules in the rack mount computer system is desirable (*see, e.g., id.*).

The systems of claims 1 and 14 can obviate these problems in certain implementations by supporting the shelf 40 by the guides 20 (through the support of the pivot 48 by the pivot support 24 of the guides 20) even when the front end of the shelf 40 is lowered relative to the back end of the shelf 40 when accessing the electronic components for service. In addition, the pivot support 24 continues to support even an extended shelf by engaging the pivot 48 of the rear catch mechanism 46.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-12 and 14-24 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,931,978 to Drake *et al.* ("*Drake*"). This rejection is being appealed.

Claims 13 and 25 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable in view of *Drake*. This rejection is being appealed.

VII. ARGUMENT

A. *Drake* Fails to Anticipate Claims 1-12 and 14-24

1. Legal standard for anticipation under 35 U.S.C. § 102(b)

When applying a reference under 35 U.S.C. § 102, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."[1] Further, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim."[2] For at least the reasons discussed in detail below, *Drake* fails to set forth each and every feature of claims 1-12 and 14-24.

2. *Drake*

As shown in FIG. 6 below, *Drake* discloses a keyboard drawer having track assemblies 84 on each side that include rollers 82 that slide back-and-forth in channel track assemblies 70/80 that are mounted in a housing that surrounds the drawer.

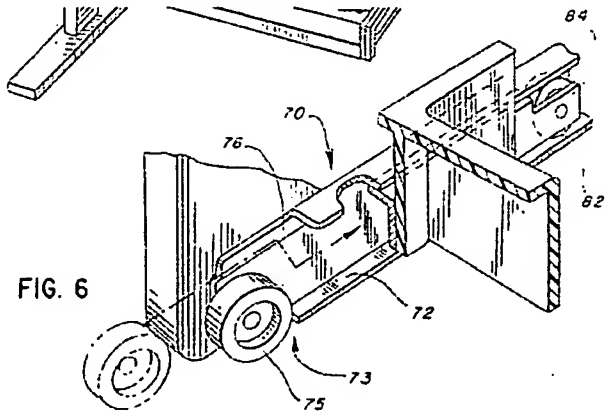

FIG. 6

Stop members 75 at the front of each channel member 72 stop the forward motion of the back roller 82 so that the drawer does not accidentally slide out of the housing, and slots 76 permit a user to lift stop members 75 out of the tracks, and thus to remove the keyboard tray. *See id.* at 2:51-66; 5:1-7; FIG. 6. Thus, if the drawer unit 30 were slid forward and released, it would tilt down, roller 84 would ride up over the top of stop member 75 (because stop member 75 would

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1 *Verdegaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987).

2 *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989).

push on the horizontally extending flange of track assembly 82), and the drawer unit 30 would fall off.

3. Claims 1 and 14 are patentable over *Drake*

Claims 1 and 14 stand finally rejected under § 102(b) in view of *Drake*. Specifically, the Examiner relies upon *Drake*'s drawer unit 30, recess 46, rollers 82, track assemblies 70/80, channel member 72, and slot 76 to allegedly show each and every element of, for example, independent claim 1. The rejection, however, ignores the fact that *Drake* does nothing to disclose or fairly suggest a pivot and pivot support as recited in claim 1:

> a slidable electronics module shelf having a . . . rear catch mechanism at the rear shelf end, the rear catch mechanism includes at least one pivot; and
>
> a pair of opposing electronics module guides to support and guide the shelf relative thereto, . . . the guides further including a pivot support disposed at the front guide end and configured to engage the pivot of the rear catch mechanism at the rear shelf end of the shelf, whereupon the shelf is pivotable about the pivot, the pivot being supported by the pivot support of the guides such that when the front shelf end of the slidable electronics module shelf is lowered relative to the rear shelf end of the slidable electronics module shelf, the electronics module guides substantially support the slidable electronics module via the at least one pivot of the rear catch mechanism.

In *Drake*, there is no such pivot or pivot support. As can be seen from FIG. 6 of *Drake* below, the roller 82 in *Drake* cannot be a pivot, because it moves upward in an arc around the stop 75 as the keyboard is tilted downward.

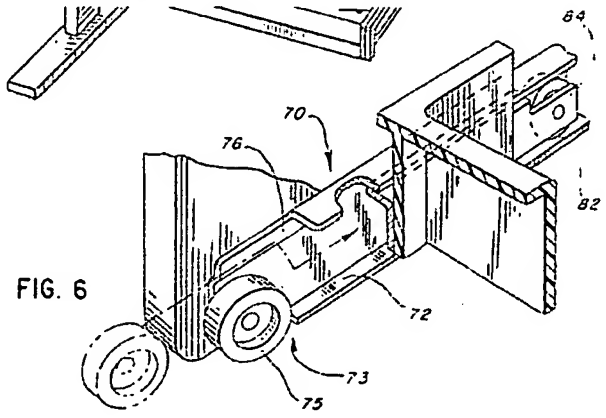

FIG. 6

The stop 75 cannot be a pivot because, at best, it would be a pivot support (assuming that there were a pivot somewhere else, which there is not). The Examiner appears to point to the channel member 72[3] as the pivot, asserting that "a structure is entitled to all of its uses and there is no structure to preclude movement of the front shelf end [of unit 30] to lower relative to the read end."[4] Such reasoning ignores that the channel member 72 in *Drake* is not part of any rear catch mechanism, as recited in claim 1, that there is no point at which pivoting occurs on the channel member (the roller 82 rides in an arc around the top of stop 75 when the tray is lowered), and that the channel member 72 (which the Examiner also presumably equates to the "guides" in claim 1) does not support the tray when it is lowered, but instead causes the tray to fall to the ground by pushing down on the stop 75 and thus causing roller 82 to spin up and out of the slot and over the stop 75.

In other words, when the tray is tilted down, the channel member 72 ***could not*** support *Drake*'s alleged pivot (roller 82) "such that when the front shelf end of the slidable electronics module shelf is lowered relative to the rear shelf end of the slidable electronics module shelf, the electronics module guides substantially support the slidable electronics module via the at least one pivot of the rear catch mechanism." This is because the alleged pivot of *Drake* (roller 82) would cease engaging and contacting the channel member 72. Rather, *Drake*'s drawer unit 30, which the Examiner uses to show Appellant's slidable electronics module shelf,[5] would only be supported (at least in part) via the stop member 86 through contact with the round stop member 75.

Furthermore, *Drake*'s Figure 6, as well as Figures 3 and 7, show that the front end of the drawer unit 30 is substantially ***prevented*** from being lowered relative to the back end of the unit 30 at all positions other than when the roller 82 is immediately adjacent the round stop member 75 (*i.e.*, when the drawer unit 30 is in an open position). Indeed, Figure 6 shows the positions of the relevant components of the drawer unit 30 when the unit 30 is in a position other than the

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[3] *See* Office Action dated November 23, 2007 ("Final Office Action") at 2.

[4] *See id.* at 3.

[5] The Final Office Action indicates that the Examiner relies on element 40 of *Drake* to allegedly show a "slidable module shelf." Final Office Action at 2. Element 40 is described in *Drake* as the "top" of the drawer unit 30. *Drake* at 4:18-22. Appellant assumes, however, that the Examiner, in fact, intended to point to *Drake*'s drawer unit 30 in attempting to show claim 1's slidable electronics module shelf and presents this brief on that assumption.

open position. In such positions, the unit roller 82 and stop member 86 are immediately adjacent and below the horizontally extending flange of the channel member 72. If a user of *Drake*'s device tried to lower the front end of the unit 30 relative to the back end of the unit 30 in this position, the roller 82 and stop member 86 would contact this flange, thereby substantially preventing any vertically-upward movement of the drawer unit 30. In short, the Final Office Action does not, and indeed cannot, show that the front end of *Drake*'s drawer unit 30 can be lowered relative to the back end of the unit 30 such that the channel member 72 supports the alleged pivot, the roller 82, at *any* position of the drawer unit 30.

For at least the foregoing reasons, Appellant respectfully submits that claims 1 and 14 are patentable over *Drake*. Reversal of the final rejections of claims 1 and 14 is respectfully requested.

4. Claims 2-12 and 15-24 are patentable over *Drake*

Claims 2-12 and 15-24 stand finally rejected over *Drake* as well. Each of claims 2-12 ultimately depend from claim 1, which defines over *Drake*, as discussed in detail above. Consequently, each of claims 2-12 also define over *Drake* for at least the same reasons. Therefore, reversal of the final rejection of each of claims 2-12 is respectfully requested.

Each of claims 15-24 ultimately depend from claim 14, which defines over *Drake*, as discussed in detail above. Consequently, each of claims 15-24 also define over *Drake* for at least the same reasons. Therefore, reversal of the final rejection of each of claims 15-24 is respectfully requested.

B. Claims 13 and 25 would not have been obvious in view of *Drake*

Claims 13 and 25 stand finally rejected under 35 U.S.C. § 103(a) as allegedly obvious over *Drake*. But neither these claims, nor any pending claim, would have been obvious to one of ordinary skill in the art at the time the inventions described in these claims were made.

For example, claims 1 and 14, from which claims 13 and 25, respectively, depend, would not have been obvious in view of *Drake*. As an initial matter, as described above, the Final Office Action fails to show that *Drake* teaches or suggests each and every element of claims 1 and 14. The M.P.E.P. instructs, however, that according to certain rationales under which claim

obviousness may be shown, "a finding that the prior art included each element claimed" must be shown. *See* M.P.E.P. § 2143(A). The Final Office Action fails to make such a finding with regards to claims 1 and 14 and, consequently, cannot make such a finding with regards to dependent claims 13 and 25.

Further, although a claim may be shown obvious by showing that "there was some teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings,"[6] no such showing has been made here with respect to any claim, but especially independent claims 1 and 14 (nor has any "reason" to modify the reference under *KSR International v. Teleflex, Inc.* been shown). Indeed, the Final Office Action is silent as to whether *Drake* could be modified to render obvious any pending claim, let alone the independent claims. Thus, such a rationale to render the claims unpatentable as obvious is unsupportable.

Even if the Final Office Action did suggest some modification to the teachings of *Drake* to purportedly show each and every element of claims 13 and 25 (and by extension claims 1 and 14), the express disclosure of *Drake* indicates that any such modification that would allow a front end of *Drake*'s drawer unit 30 to be lowered relative to a back end of the unit 30 would render *Drake*'s computer support device 10 unsuitable for its intended purpose. Thus, such modifications would be improper, as the M.P.E.P. requires that a modification to a relied upon reference cannot render the reference unsatisfactory for its intended purpose. *See* M.P.E.P. § 2143.01(V). One of the objects of *Drake*'s invention is to provide a "computer support device with . . . a sliding drawer unit with a computer keyboard area and storage areas." *Drake* at 2:42-44. Clearly, this object is accomplished through a drawer unit 30 that is slideable while remaining substantially horizontal and parallel to the surface on which the device 10 is supported. *See* Figs. 1, 2, 3, and 8. This is not surprising since the use of a keyboard placed in *Drake*'s keyboard storage area would likely be made easiest when the keyboard itself is substantially horizontal. But modifying *Drake* such that the front end of the drawer unit 30 is lowered relative to the back end of the unit 30 by *any appreciable amount* would tilt the keyboard area and the keyboard downward, thereby making the keyboard substantially unusable

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[6] M.P.E.P. § 2143(G)(1).

by a user of *Drake*'s device 10. Indeed, such a modification would render *Drake*'s device 10 unsuitable for one of the very objects of the invention described and claimed in *Drake*.

For at least the foregoing reasons, Appellant respectfully submits that the pending claims, including claims 13 and 25, would not have been obvious in view of *Drake*. Reversal of the final rejection of claims 13 and 25 under § 103 is respectfully requested.

VIII. CONCLUSION

Appellant respectfully requests the Honorable Board of Patent Appeals and Interferences to reverse the Examiner's rejection of claims 1-12 and 14-24 under 35 U.S.C. § 102(b) as being anticipated by *Drake*, as well as the Examiner's rejection of claims 13 and 25 under 35 U.S.C. § 103(a) over *Drake*. As discussed in detail above, the prior art does not teach or suggest many of the features present in the various claims, and the Examiner has not sufficiently identified such features in the prior art. Accordingly, for at least the aforementioned reasons, Appellant respectfully requests the Honorable members of the Board of Patent Appeals and Interferences to reverse the outstanding rejections in connection with the present application and permit each of claims 1-25 to be passed to allowance.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

All fees are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply all charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 16113-1313001.

Respectfully submitted,

Date: September 23, 2008

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Appendix of Claims

1. A system providing access to components of a rack mount computing system, comprising:

a slidable electronics module shelf having a front shelf end and a rear shelf end, the shelf including an electronics components region and a rear catch mechanism at the rear shelf end, the rear catch mechanism includes at least one pivot; and

a pair of opposing electronics module guides to support and guide the shelf relative thereto, the guides having a front guide end and a rear guide end, each guide including a track to support and guide the shelf thereon, the guides further including a pivot support disposed at the front guide end and configured to engage the pivot of the rear catch mechanism at the rear shelf end of the shelf, whereupon the shelf is pivotable about the pivot, the pivot being supported by the pivot support of the guides such that when the front shelf end of the slidable electronics module shelf is lowered relative to the rear shelf end of the slidable electronics module shelf, the electronics module guides substantially support the slidable electronics module via the at least one pivot of the rear catch mechanism.

2. The system of claim 1, wherein the pivot support of the electronics module guides includes a front guide wall and a bottom guide wall adjoining the front guide wall.

3. The system of claim 1, wherein the pivot support includes a front wall to engage the pivot whereupon the front wall stops the slidable electronics module shelf from sliding past the front wall away from the front guide end.

4. The system of claim 1, wherein the pivot is disposed below the electronics components region.

5. The system of claim 1, wherein the slidable electronics module shelf includes two pivots corresponding to the pair of opposing electronics modules guides.

6. The system of claim 1, wherein the electronics module guides include two pivot supports, each corresponding to one of the electronics module guides.

7. The system of claim 1, wherein the slidable electronics module shelf further includes at least one front stop at the front shelf end configured to engage the pivot support of the electronics module guides, whereupon the front stop stops the slidable electronics module shelf from sliding past the pivot support toward the rear guide end.

8. The system of claim 1, wherein the pivot is coupled to the electronics components region via a connector.

9. The system of claim 1, wherein the pivot support is disposed below the track.

10. The system of claim 1, wherein the pivot slides below the track as the front shelf end of the shelf slides away from the front guide end of the guides.

11. The system of claim 10, wherein the pivot cooperate with the track to prevent the slidable electronics module shelf from being disengaged with the tracks prior to the pivot of the shelf engaging the pivot support of the guides.

12. The system of clam 1, wherein the shelf is pivotable about the pivot such that the front shelf end tilts down to below the rear shelf end whereupon the shelf is substantially supported by the pivot support.

13. The system of clam 1, wherein the guides further include a second pivot support disposed at the rear guide end.

14. A shelf support system, comprising:

a slidable shelf having a front shelf end and a rear shelf end, the shelf including a storage mounting region and a rear catch mechanism at the rear shelf end, the rear catch mechanism includes at least one pivot;

a pair of opposing shelf tracks having a front track end and a rear track end, the tracks being configured to support and guide the shelf relative thereto, the shelf being in a stored position when the front shelf end is approximately adjacent to the front track end and the rear shelf end is approximately adjacent to the rear track end; and

a pivot support disposed at the front track end and configured to engage the pivot of the rear catch mechanism at the rear shelf end of the shelf where the rear shelf end of the shelf is approximately adjacent to the front track end of the tracks, whereupon the pivot of the shelf is supported by the pivot support and the shelf is pivotable about the pivot such that when the front shelf end of the slidable shelf is lowered relative to the rear shelf end of the slidable shelf, the pivot support substantially supports the slidable shelf via the at least one pivot of the rear catch mechanism.

15. The system of claim 14, wherein the pivot support includes a front guide wall and a bottom guide wall adjoining the front guide wall.

16. The system of claim 14, wherein the pivot support includes a front wall to engage the pivot whereupon the front wall stops the slidable shelf from sliding past the front wall away from the front track end.

17. The system of claim 14, wherein when the shelf is in the stored position, the track is between the pivot and the storage mounting region.

18. The system of claim 17, wherein the pivot cooperate with the track to prevent the slidable shelf from being disengaged with the tracks prior to the pivot of the shelf engaging the pivot support.

19. The system of claim 14, wherein the slidable shelf includes two pivots corresponding to the pair of opposing tracks.

20. The system of claim 14, wherein the tracks include two pivot supports, each corresponding to one of the tracks.

21. The system of claim 14, wherein the slidable shelf further includes at least one front stop at the front shelf end configured to engage the pivot support of the tracks, whereupon the front stop stops the slidable shelf from sliding past the pivot support toward the rear track end.

22. The system of claim 14, wherein the pivot is coupled to the storage mounting region via a connector.

23. The system of claim 14, wherein the pivot support is disposed below the track.

24. The system of claim 14, wherein the shelf is pivotable about the pivot such that the front shelf end tilts down to below the rear shelf end whereupon the shelf is substantially supported by the pivot support.

25. The system of claim 14, further comprising another of said pivot support disposed at the rear track end.

Evidence Appendix

NONE

Related Proceedings Appendix

NONE